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ABSTRACT

The present invention provides improved cathodes and methods for producing such cathodes for ultimate use in conjunction with valve metal capacitors. A family of titanium carbide cathodes according to the present invention can be produced so that they inhabit a pre-existing metallic surface such as an inner surface of a titanium casing adjacent but insulated from direct electrical communication from an anode. Foil-type valve metal anodes as well as porous valve metal anodes formed from metallic powders may be used in conjunction with the titanium cathodes of the present invention.